

WE CLAIM:

1           1. A mobile device comprising a host processor and a disk drive, the disk drive having a  
2 rotating disk media and a moveable read/write head disposed over the disk media, the disk media  
3 being divisible into zones that are radially disposed in discrete areas of the disk media, each zone  
4 having a plurality of tracks for storing data, the disk drive comprising:

5                 a first data storage zone, wherein the mobile device may read data from the first  
6 data storage zone when the mobile device is in a mobile environment; and

7                 a second data storage zone, wherein the mobile device may read data from the  
8 second data storage zone only when the mobile device is in a non-mobile environment and may  
9 not read data from the second data storage zone when the mobile device is in a mobile  
10 environment.

1           2. A mobile device as defined in claim 1, wherein the mobile device is in a non-mobile  
2 environment when the mobile device is placed in a docking station and the mobile device is in a  
3 mobile environment when the mobile device is not placed in a docking station.

1           3. A mobile device as defined in claim 1, wherein:

2                 the first data storage zone includes a mobile-normal zone and a docked-safe zone;

3                 the second data storage zone includes an ultra-safe zone;

4                 the mobile device may write data to the ultra-safe zone or to the docked-safe zone only  
5 when the mobile device is in a non-mobile environment and not when the mobile device is in a  
6 mobile environment; and

7                 the mobile device may write data to the mobile-normal zone when the mobile device is in  
8 a mobile environment or when the mobile device is in a non-mobile environment.

1           4. A mobile device as defined in claim 3, wherein the disk drive prevents the moveable  
2 read/write head from dwelling over the ultra-safe zone when the device is in a mobile  
3 environment.

1           5. A mobile device as defined in claim 3, wherein the disk drive prevents the moveable  
2 read/write head from moving over the ultra-safe zone when the device is in a non-mobile  
3 environment.

1           6. A mobile device a defined in claim 1, wherein the first data storage zone includes a  
2 mobile-safe zone and a mobile-normal zone, and the mobile-safe zone has a track pitch that is  
3 wider than a track pitch of the mobile-normal zone.

1           7. A mobile device a defined in claim 6, wherein the mobile-safe zone has a track pitch  
2 that is wider than a track pitch of the second data storage zone.  
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4           8. A mobile device a defined in claim 1, wherein:  
5 the disk drive includes a ramp for parking an actuator arm coupled to the read/write head  
6 when the disk drive is in a spin-down mode; and

7 the disk drive includes a mobile-low-power zone that is located on the disk media so that  
8 an actuator current is minimized for moving the read/write head to a data track in the mobile-  
9 low-power zone upon loading of the read/write head over the disk media from the ramp.

1           9. A mobile device a defined in claim 8, wherein a distance from an outer diameter of the  
2 disk media to the mobile-low-power zone is between about 10 and 15 percent of a distance  
3 between the outer diameter and an inner diameter of the disk media.

1           10. A disk drive for use in a mobile device including a host processor, the disk drive  
2 having a rotating disk media and a moveable read/write head disposed over the disk media, the  
3 disk media being divisible into zones that are radially disposed in discrete areas of the disk  
4 media, each zone having a plurality of tracks for storing data, the disk drive comprising:  
5 a first data storage zone, wherein the mobile device may write data to the first data  
6 storage zone when the mobile device is in a mobile environment; and

7 a second data storage zone, wherein the mobile device may read data from the second  
8 data storage zone only when the mobile device is in a non-mobile environment and may not read  
9 data from the second data storage zone when the mobile device is in a mobile environment.

1 11. A disk drive as defined in claim 10, wherein the mobile device is in a non-mobile  
2 environment when the mobile device is placed in a docking station and the mobile device is in a  
3 mobile environment when the mobile device is not placed in a docking station.

1 12. A disk drive as defined in claim 10, wherein  
2 the first data storage zone includes a mobile-normal zone and a docked-safe zone;  
3 the second data storage zone includes an ultra-safe zone;  
4 the mobile device may write data to the ultra-safe zone or to the docked-safe zone only  
5 when the mobile device is in a non-mobile environment and not when the mobile device is in a  
6 mobile environment; and  
7 the mobile device may write data to the mobile-normal zone when the mobile device is in  
8 a mobile environment or when the mobile device is in a non-mobile environment.

1 13. A disk drive as defined in claim 12, wherein the disk drive prevents the moveable  
2 read/write head from dwelling over the ultra-safe zone when the device is in a mobile  
3 environment.

1 14. A disk drive as defined in claim 12, wherein the disk drive prevents the moveable  
2 read/write head from moving over the ultra-safe zone when the device is in a non-mobile  
3 environment.

1 15. A disk drive a defined in claim 10, wherein the first data storage zone includes a  
2 mobile-safe zone and a mobile-normal zone, and the mobile-safe zone has a track pitch that is  
3 wider than a track pitch of the mobile-normal zone.

1           16. A disk drive a defined in claim 15, wherein the mobile-safe zone has a track pitch  
2   that is wider than a track pitch of the second data storage zone.

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4           17. A disk drive a defined in claim 10, wherein:  
5           the disk drive includes a ramp for parking an actuator arm coupled to the read/write head  
6   when the disk drive is in a spin-down mode; and

7           the disk drive includes a mobile-low-power zone that is located on the disk media so that  
8   an actuator current is minimized for moving the read/write head to a data track in the mobile-  
9   low-power zone upon loading of the read/write head over the disk media from the ramp.

1           18. A disk drive a defined in claim 17, wherein a distance from an outer diameter of the  
2   disk media to the mobile-low-power zone is between about 10 and 15 percent of a distance  
3   between the outer diameter and an inner diameter of the disk media.